Welcome to Earth Matters, Field notes on New Mexico's Enchanting Landscapes.

Living in the arid southwest, it should come as no surprise that our water resources are limited! With the trends of warming temperatures, and reduced snowpack in the winter, streams and rivers in New Mexico are expected to have less water. As this happens, we will rely more heavily on groundwater resources pumped from wells. Groundwater accounts for about 50% of the total water and 87% of public drinking water used in New Mexico. In many regions throughout the state, we are already seeing declines in the amount of fresh groundwater available in storage- our water supply bank accounts are dwindling.

The only way to make deposits to our groundwater savings account is with recharge. Recharge refers to water, such as rain, snow, or river water, that infiltrates through the ground and replenishes the aquifers. In New Mexico, the majority of recharge occurs at high elevation, in the mountains, where there is more annual precipitation, cooler temperature, and a thinner soil layer. At lower elevations, water typically evaporates or is captured by vegetation before it can infiltrate.

Typically, surface water is stored in large reservoirs throughout the state, which, unfortunately, pay very high interest rates of nearly 10% in the form of evaporation loss to the atmosphere. Recognizing this, some water managers have shifted toward “banking” water in the subsurface, by managed aquifer recharge. This can be accomplished by letting water infiltrate in engineered ponds or arroyos, or actively injecting water back into the ground. While Managed Aquifer Recharge is further developed in New Mexico,// all of us can do our part to conserve our water use// by reducing outdoor irrigation, taking shorter showers or fixing water leaks. Help New Mexico build that groundwater savings account by doing your part to ensure we have water for future generations.

Celebrating Earth Science Week, this is Ethan Mamer, a Hydrogeologist with the New Mexico Bureau of Geology at New Mexico Tech.